UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,034	11/19/2003	Uri Herzberg	60004 (72021)	7145

21874 7590 11/02/2007

EDWARDS ANGELL PALMER & DODGE LLP
P.O. BOX 55874
BOSTON, MA 02205

EXAMINER	
CLAYTOR, DEIRDRE RENEE	
ART UNIT	**PAPER NUMBER**
1617	

MAIL DATE	DELIVERY MODE
11/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/718,034	HERZBERG ET AL.	
	Examiner	Art Unit	
	Renee Claytor	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 12-63* is/are pending in the application.

4a) Of the above claim(s) *1-6,12-42 and 53-59* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *43-52 and 60-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's response filed on 8/10/2007 has been fully considered. Applicants have withdrawn claims 1-6, 12-42, 53-59 and cancelled claims 7-11. Applicant's arguments over the 35 USC 112, first paragraph rejection have been fully considered. Applicants argue that enablement is measured against the background of the knowledge of one of skill in the art and the teachings of the specification. Applicants assert that one of ordinary skill would know that existing treatments for narcotic analgesic dependence are generally applicable for all opioids and give examples that methadone is approved for opioid dependence in general and not limited to one opioid narcotic. Applicants further assert that the specification provides working examples demonstrating at least three VR1 antagonists that reduce tolerance to opioid treatments and that this is sufficient to meet the enablement requirement. While it is understood that common treatments for narcotic analgesic dependence are applicable for all opioids, the examples given by Applicant are methadone and buprenorphine, which are both opioid compounds. Being that the present invention is drawn to the use of VR1 antagonists, which bind to the vanilloid receptor, it is undetermined that the same idea can be extrapolated to non-opioid compounds. In addition, VR1 antagonists comprise a wide array of compounds as discussed in the specification on pages 5-17 of the present specification. Therefore, one of ordinary skill in the art would not presume that all of the various vanilloid receptor antagonists would necessarily inhibit tolerance or dependence to all narcotic analgesics. Therefore, the 35 USC 112 first paragraph rejection is maintained.

Applicant's arguments over the 35 USC 102(e) rejection have been considered and are not found persuasive. Applicants argue that the Kyle reference used (US Patent 6,974,818) in the rejection, because Kyle has a filing date of 2/27/2003, which is after the effective filing date of 12/13/2002 of the present application. Though Kyle has a filing date of 2/27/2003, there is a claim to priority to US Provisional Applications 60/360,172 filed on 3/1/2002 and 60/411,084 filed on 9/17/2002. In application 60/411,084, it is taught that the compounds of the invention are used for the treatment of addictive disorders (see page 20, lines 15 and 20) similar to that discussed in the patent (6,974,818) in column 31, lines 19-26. Therefore, the Kyle reference receives the priority date of 9/17/2002 and is useful in a 102(e) reference. Therefore, the rejection is maintained.

Applicant's arguments over the 35 USC 103(a) rejection have been fully considered and are found persuasive. It is noted that the Bakthavatchalam patent (U.S. Patent 7,074,799) shares a common assignee of Neurogen Corporation; therefore, this patent cannot be used under a rejection of 103(a) and the rejection is hereby withdrawn.

Applicant's addition of new claims necessitated the following modified and new grounds of rejection.

Claim Rejections – 35 U.S.C. § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 43-52 and 60-63 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the inhibition of tolerance and dependence to morphine with two different VR1 antagonists (including the elected species), does not reasonably provide enablement for inhibition of tolerance to all narcotic analgesics with all VR1 antagonists. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

The instant specification fails to provide information that would allow the skilled artisan to practice the instant invention without undue experimentation. Attention is directed to *In re Wands*, 8 USPQ2d 1400 (CAFC 1988) at 1404 where the court set forth the eight factors to consider when assessing if a disclosure would have required undue experimentation. Citing *Ex parte Forman*, 230 USPQ 546 (BdApls 1986) at 547 the court recited eight factors: (1) the nature of the invention; (2) the state of the prior art; (3) the relative skill of those in the art; (4) the predictability or unpredictability of the art; (5) the breadth of the claims; (6) the amount of direction or guidance presented; (7) the presence or absence of working examples; and (8) the quantity of experimentation necessary.

(1) The nature of the invention: The rejected claims 43-52 and 60-63 are drawn to a method for inhibiting the development of tolerance or dependence to a narcotic analgesic comprising administration of the narcotic analgesic and a VR1 antagonist.

(2) The state of the prior art: The state of the art regarding treating morphine addiction is high (Rui-Bin et al., Acta Pharmacol Sin 24 (7): 631-36). However, the state of the art for the treatment of addiction of all narcotic analgesics with all VR1 antagonists is underdeveloped. The skilled artisan would view that the inhibition of addiction of all narcotic analgesics with all VR1 antagonists is highly unlikely.

(3) The predictability of unpredictability of the art: The skill artisan would view that the inhibition of the development of tolerance to all narcotic analgesics with all VR1 antagonists is highly unpredictable.

(4) The breadth of the claims: Claims 43-52 and 60-63 embrace a method for inhibiting the development of tolerance to a narcotic analgesic comprising administration of a narcotic analgesic and a VR1 antagonist.

(5) The amount of guidance or direction presented: In the instant case, working examples are presented for inhibiting tolerance to the effects of morphine in the specification in Example 12. Studies were performed in rats in which pain was first induced, and animals were treated with morphine or one of two VR1 antagonists. The results show that treatment with morphine alone causes tolerance to develop, but when a VR1 antagonist is given with morphine, the development to tolerance is reversed. However, there are a lack of working examples presented in the specification as filed showing how to inhibit the development of tolerance to all narcotic analgesics by administering all VR1 antagonists. Note that lack of a working example is a critical factor to be considered, especially in a case involving an unpredictable and undeveloped art. See MPEP § 2164.

(6) The presence or absence of working examples: Applicant provides working examples for inhibiting the development of tolerance to morphine with two VR1 antagonists. However, applicant does not provide any working examples for inhibiting the development of tolerance to all narcotic analgesics with all VR1 antagonists.

(7) The quantitation of experimentation necessary: Claims 43-52 and 60-63 read on a method for inhibiting the development of tolerance to a narcotic analgesic comprising administration of a narcotic analgesic and a VR1 antagonist. As discussed above, the specification provides examples for inhibiting the development of tolerance to morphine with two VR1 antagonists, but the specification fails to provide sufficient support for inhibiting the development of tolerance to all narcotic analgesics with all VR1 antagonists. Applicant fails to provide information sufficient to practice the claimed invention, absent undue experimentation. Genetech, 108 F.3d at 1366 states that "a patent is not a hunting license. It is not a reward for search, but compensation for its successful conclusion" and "patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable".

Claim Rejections – 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 43-45 and 48-50 rejected under 35 U.S.C. 102(e) as being anticipated by Kyle et al. (US Patent 6,974,818).

Kyle et al. teach compounds that inhibit vanilloid receptor 1 (VR1) function in a cell (Col. 12, lines 19-22). These compounds are administered to animals of need of treatment for addictive disorders, including opioid dependence (Col. 5, lines 19-30, Col. 31, lines 18-25 and Col. 32, line 32). Example 6 outlines a study proving that the compounds of the Kyle et al. invention are capable of decreasing morphine self-administration (thereby inhibiting tolerance), which is a model for an addictive disorder.

Claim Rejections – 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 46-47, 51-52 and 62-63 rejected under 35 U.S.C. 103(a) as being unpatentable over Kyle et al. (US Patent 6,974,818) as applied to claims 43-45 and 48-50 in the above rejection, in view of Bakthavatchalam et al. (US Patent 6,723,730).

Bakthavatchalam et al. teach VR1 antagonists that exhibit K_i values less than 1 micromolar and 100 nanomolar (Col. 17, lines 30-38). Further Bakthavatchalam et al. teach various VR1 receptor antagonists that are multi-aryl (see Table III).

Accordingly, it would be obvious to a person of skill in the art to combine the inventions of Kyle et al. which teach that compounds that inhibit the VR1 receptor are effective in inhibiting the development of tolerance to narcotic analgesics, namely morphine, with the invention of Bakthavatchalam et al. which teach various VR1 antagonists with the claimed K_i values and compounds that are multi-aryl. One would be motivated to combine the prior art references because it is taught by Kyle et al. that VR1 antagonists are useful in treating addictive disorders and because Bakthavatchalam et al. teach VR1 antagonists, one would reasonably expect the same result of inhibition of tolerance to narcotic analgesics.

Conclusion

No claims are allowed. Art was not found for the elected species of (6-triflurомethyl-pyridin-3-yl)-[7-(3-trifluoromethyl-pyridin-2-yl)-quinazolin-4-yl]-amine; therefore, the search was expanded to VR1 antagonists.

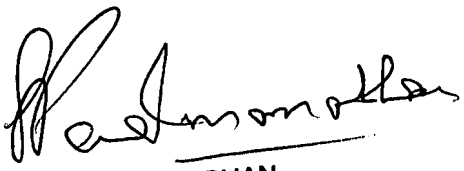
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renee Claytor whose telephone number is 571-272-8394. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Renee Claytor



SREENI PADMANABHAN
SUPERVISORY PATENT EXAMINER